

Abstract

A driver circuit for a laser diode or other optical source includes an input stage, an output stage, and a current generator circuit. The current generator circuit is adapted to establish a modulation current for application to one of a first output and a second output of the output stage in accordance with a differential input data signal applied to the input stage. The input stage includes first and second differential pairs. The first differential pair has the differential input data signal applied thereto, is implemented using MOS devices, and has substantially unity gain. The second differential pair receives as its inputs corresponding outputs of the first differential pair, is implemented using bipolar devices, and has a gain greater than unity. The first and second differential pairs are thus configured such that application of the differential input data signal at a substantially rail-to-rail voltage swing to the first differential pair will not exceed a junction reverse bias constraint of the second differential pair.